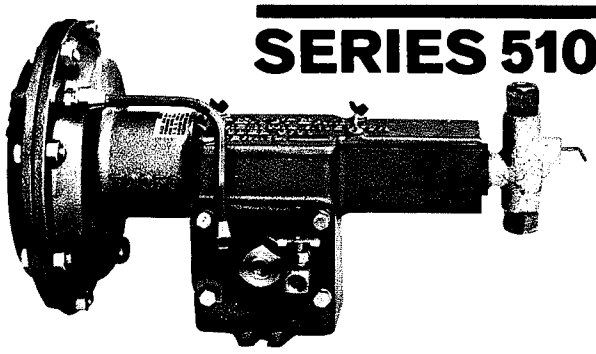
TEXSTEAM INC.

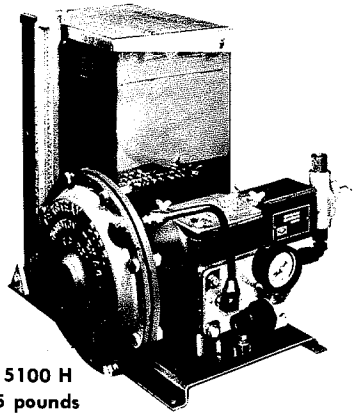
Pump Catalog & Parts List

SERIES 5100

AIR OR GAS DRIVEN INJECTORS



Series 5100 LP
Wt. 45 pounds



Series 5100 H
Wt. 65 pounds

DESCRIPTION

The 5100 Series Texsteam Chemical Injectors are single acting, positive displacement plunger-type pumps, powered by a diaphragm motor with a spring return. Speed control is accomplished by regulating the exhaust gas discharge. Reversal is accomplished by a direct spring-actuated switching mechanism (rotary three-way valve). Volume is controlled by the speed of the pump and by the stroke length, either 1″ or ⅓″ lengths. The 5100 Series is capable of pumping high pressures with gas pressure as low as 8 psi and handling volume output up to 30 gallons per day.

The pump is lightweight, compact and contains a minimum of working parts for easy maintenance. Each fluid pump head is equipped with a stainless steel plunger, ball checks, ball check springs, top seat, top bushing, bottom bushing, adjustable type packing and a priming valve. The plunger is enclosed with a drain to handle plunger drip. A double drip lip on the thrust rod eliminates the problem of lubricating oil contamination caused by packing leakage.

The 5100 Series performs accurately at high and low volume because (1) the head is designed for high volumetric efficiency, (2) a positive trip mechanism assures fine control of plunger stroke length, and (3) speed is accomplished by control of exhaust gas discharge so as to create a rapid fluid discharge with slow suction.

APPLICATIONS

1. **The introduction of de-emulsifiers, solvents, corrosion inhibitors, de-salting agents and flocculants in oil country operation**
2. **High pressure bearing lubrication**
3. **Water treatment**
4. **Blending processes in refining and process plants**
5. **Injection of methanol in gas pipelines**
6. **Hydrostatic testing**
7. **Sampling**

ACCESSORIES & OPTIONALS

SOUR GAS TRIM — Pump models L and LP are furnished with sour gas trim as standard. Models H and HP are available for sour gas service on specification. See table captioned PARTS REQUIRED FOR SOUR GAS APPLICATIONS on page 7.

TB-40 REGULATOR — for utilizing gas pressures to 1500 PSI

ALTERNATE PARTS — Teflon or Viton packing, hastelloy balls.

TC-169 DRUM RACK is equipped with shelf for mounting most Texsteam pumps with or without reservoir. The heavy galvanized angle iron Drum Rack can be easily loaded from back of pickup truck.

MODELS AVAILABLE

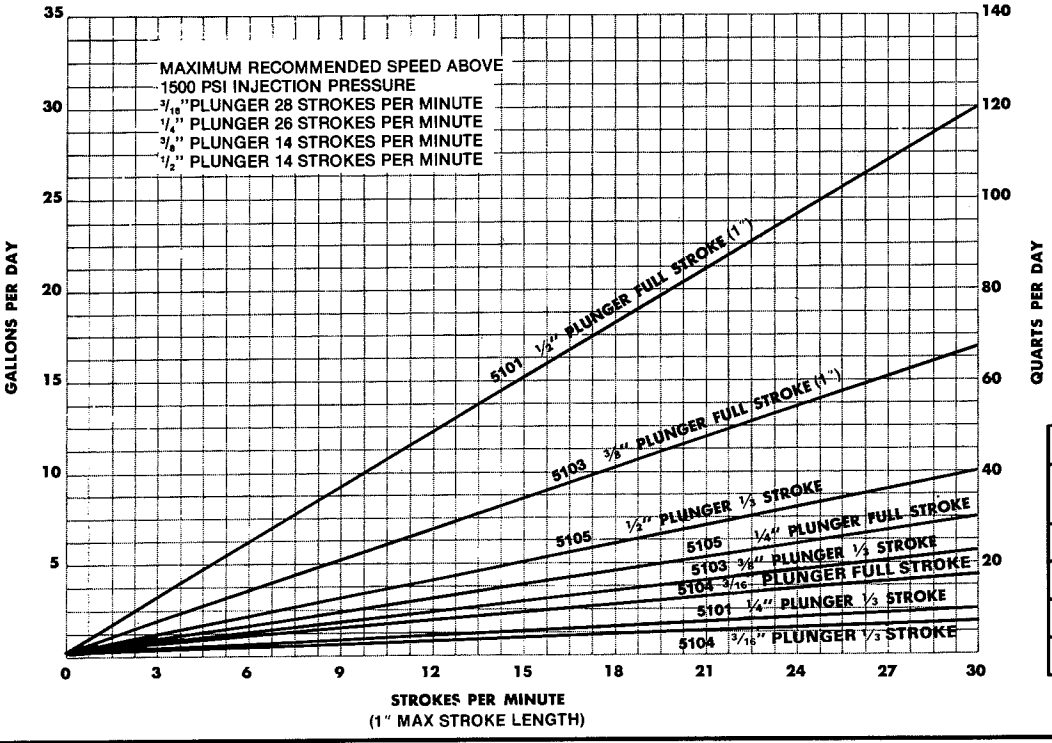
PLUNGER SIZE	MAXIMUM DISCHARGE PRESSURE	VOLUME (QPD = quarts per day; GPD = gallons per day) FOR OPERATION OFF AIR OR GAS PRESSURE TO 35 PSI (CONSTANT)				FOR OPERATION OFF AIR OR GAS PRESSURE TO 400 PSI			
		POWER UNIT[1]		CHEMICAL INJECT.[2]		POWER UNIT[3]		CHEMICAL INJECT.[4]	
5100 SERIES (STANDARD PACKING)		Model No.	Max. Vol.	Model No.	Max. Vol.	Model No.	Max. Vol.	Model No.	Max. Vol.
3/16"	1500 PSI	5104 LP	4.2 GPD	5104 L	4.2 GPD	5104 HP	4.2 GPD	5104 H	4.2 GPD
1/4"	1500 PSI	5101 LP	7.5 GPD	5101 L	7.5 GPD	5101 HP	7.5 GPD	5101 H	7.5 GPD
3/8"	1500 PSI	5103 LP	16.8 GPD	5103 L	16.8 GPD	5103 HP	16.8 GPD	5103 H	16.8 GPD
1/2"	1500 PSI	5105 LP	32 GPD	5105 L	32 GPD	5105 HP	32 GPD	5105 H	32 GPD
5110 SERIES (HIGH PRESSURE PACKING)		Model No.	Max. Vol.	Model No.	Max. Vol.	Model No.	Max. Vol.	Model No.	Max. Vol.
3/16"	6000 PSI	5114 LP	2.8 GPD	5114 L	2.8 GPD	5114 HP	2.8 GPD	5114 H	2.8 GPD
1/4"	6000 PSI	5111 LP	5.0 GPD	5111 L	5.0 GPD	5111 HP	5.0 GPD	5111 H	5.0 GPD
3/8"	6000 PSI	5113 LP	12.0 GPD	5113 L	12.0 GPD	5113 HP	12.0 GPD	5113 H	12.0 GPD
1/2"	3500 PSI	5115 LP	22.0 GPD	5115 L	22.0 GPD	5115 HP	22.0 GPD	5115 H	22.0 GPD

[1]Basic pump no tank, base, regulator or gauge (Shipping Weight: 45 lbs.)
[2]Furnished with 5 gallon stainless steel tank mounted on heavy galvanized steel base and equipped with level gauge and suction line but no regulator or gauge (Shipping Weight: 60 lbs.)
[3]Furnished with regulator and gauge but no tank or base (Shipping Weight: 48 lbs.)
[4]Furnished with 5 gallon stainless steel tank mounted on heavy galvanized steel base and equipped with level gauge, suction line, regulator and gauge (Shipping Weight: 62 lbs.)

*Volumes shown for low pressure heads with standard packing are at zero PS16 discharge pressure.

**Volumes for high pressure heads with hard packing are shown at 1500 PS16 discharge pressure.

VOLUME



Power End to Fluid End Ratio	
Plunger Size	Operating Ratio Fluid/Gas
3/16"	1200/1
1/4"	750/1
3/8"	300/1
1/2"	180/1

GAS CONSUMPTION CHART

(STANDARD CUBIC FEET OF GAS REQUIRED TO PUMP ONE GALLON) — FOR INLET REGULATOR SIZING, DOUBLE THE INDICATED REQUIREMENT

INJECTION PRESSURE IN PSI	100	200	500	1000	1500	2000	3000	3500	4000	5000	6000
1/2" PISTON FULL STROKE	53	54	57	62	71	76	84	95			
1/2" PISTON 1/3 STROKE (5105)	159	162	171	186	213	228	252	285			
3/8" PISTON FULL STROKE	120	126	148	164	177	185	243	278	314	355	374
3/8" PISTON 1/3 STROKE (5103)	360	378	444	492	531	555	729	834	942	1065	1122
1/4" PISTON FULL STROKE	244	245	248	270	288	308	340	355	369	405	497
1/4" PISTON 1/3 STROKE (5101)	732	735	744	810	864	924	1020	1065	1107	1215	1491
3/16" PISTON FULL STROKE	457	458	462	469	476	530	545	555	560	575	589
3/16" PISTON 1/3 STROKE (5104)	1371	1374	1386	1407	1428	1590	1635	1665	1680	1725	1776

INSTALLATION

IMPORTANT
MAX. GAS DIAPHRAGM CHAMBER PRESSURE 35 P.S.I.
FILL WITH ONE AND A HALF PINTS S.A.E. 10W (NON DETERGENT) OIL.
GREASE THRUST ROD OCCASIONALLY.

1. Remove pump from carton and inspect for possible damage in transit from factory. The cardboard carton was designed especially for this pump and offers ample protection for normal handling. If the pump has been damaged in transit, file claim with the carrier.

2. Loosen and remove the four thumb screws that hold the cover and fill the compartment that has the spring with one and one-half pints SAE 10 wt. non-detergent oil. Fill to bottom of thrust rod. (Item 11, pg. 5).

3. Oil the thrust rod.

4. Select the stroke length desired, either full or short according to your requirements. See the data chart—full stroke is 1″, and short stroke is equal to ⅓″.

5. Check plunger packing gland to make sure packing is not too tight.

6. Install the priming valve TA-1497 in its position on the pump head.

7. Blow or clean line before hooking up air or gas line to inlet. On Models 5100 LP and 5100 L the air or gas line (if it does not exceed *35 psi*) is piped directly into the inlet TA-906. The inlet is a ¼″ female connection. *Do not hook up the gas supply to the small valve.* THIS IS THE GAS EXHAUST. Gas supply should be constant pressure to assure even stroke speed.

If the gas supply pressure exceeds 35 psi or is erratic, some means of reducing the gas pressure to below 35 psi must be used. Model 5100 HP and 5100 H are equipped with a pressure regulator and pressure gauge for reducing the gas pressure. The regulator supplied with the 5100 HP and 5100 H can be used up to 400 psi. If the gas supply pressure exceeds 400 psi, the customer should equip the pump with a Texsteam TB-40 regulator which has a maximum inlet pressure of 1500 psi.

8. Close gas exhaust valve. The gas exhaust is a ¼″ female pipe connection.

9. Hook up the fluid suction piping to the bottom bushing on the pump head. This is a ¼″ female pipe connection. Care should be exercised in that a suitable strainer should be installed in the suction line to trap foreign matter that might injure the plunger, plunger packing or interfere with the check valve operation.

10. On hooking up the fluid discharge line, the top connection on the pump head is the outlet and it is a ¼″ FNPT. The discharge line should be at least 5/16″ copper tubing and a TA-676 line check should be installed at the point of injection in case the fluid discharge line ruptures or is broken. A TA-676 line check is included with the 5100 Series pump and careful observation of the flow direction will eliminate the possibility of a ruptured fluid discharge line.

11. Turn the gas on and slowly open the gas exhaust valve. The pump will start automatically. Make certain the suction line is filled with fluid and test the pump head by opening the priming valve. After the pump discharges clear fluid without bubbles, close the priming valve for normal pumping operations. At this point make a visual check of the plunger drip and using the TA-315 gland wrench that was included in the package, slowly tighten the gland until leakage just stops. It may be necessary to readjust the packing the next day. A slight leak during break-in is beneficial. Sufficient time should be allowed to let **the packing "seat in". Packing should only be adjusted after pressure has been removed from pump head. Never adjust packing against pressure.**

12. After the pump is in operation, replace the lid and thumb screws and keep the TA-315 gland wrench handy for future packing adjustments.

START UP AND OPERATION

After the pump has been installed, only a few minor adjustments are necessary for every day operation. Here are a few check points:

1) **Check gas supply pressure.**
2) **Check speed control with the chart which will give you the volume the pump is injecting.**
3) **Check the oil level. The normal level is just touching the bottom of thrust rod, Item 11, pg. 5. Use 1½ pints of SAE 10 wt. non-detergent oil.**
4) **Check for excess leakage around the packing gland. If it is not possible to stop excess leaking, replace the packing. If the plunger is badly scored, replace the plunger. Do not adjust packing against pressure.**
5) **Open the priming valve to check pump action.**
6) **Oil thrust rod occasionally.**

MAINTENANCE

Should pump run but fail to pump chemical, remove TB-736 bottom bushing and TA-1496 top bushing—inspect and clean balls and seats. Inspect for damage and replace if necessary. Should pump still not pump chemical, remove TB-548 cover and check to see if TA-290 Cotter Pin is in place, also TA-1828 Stroke Adjusting Pin.

Check to see if chemical is getting to pump unscrew TA-1497 priming valve stem. When chemical flows from bleed hole, shut off TA-1497 priming valve.

After hooking up gas or air to TA-906 (inlet bushing) disc retainer, should pump fail to operate. Make sure the inlet pressure does not exceed 35 psi—excessive pressure could tend to lock the pump. Make sure speed control valve (gas exhaust) is open. Make sure plunger packing is not too tight. Use gland wrench TA-315 to adjust packing gland nut TA-4104.

If pump stops and a constant flow of gas comes from TA-1835 air vent, this means that the TC-290 diaphragm has ruptured.

TO REPLACE DIAPHRAGM

Remove TC-252 diaphragm cover. Remove lock nut and washer on end of TB-444 thrust rod. It is important that you do not allow TB-444 thrust rod to turn when removing lock nut and washer. To prevent the rod from turning, remove TB-548 cover and hold the rod in position by inserting punch or drift pin into the "large" hole forward of the TA-1832 Stirrup assembly. Replace burst diaphragm and reassemble.

TO REPLACE RETURN SPRING

Remove TC-252 diaphragm cover—remove lock nut and washer on end of TB-444 thrust rod. It is important that you do not allow TB-444 thrust rod to turn when removing lock nut and washer. To prevent the rod from turning remove TB-548 cover and hold the rod in position by inserting punch or drift pin into the "large" hole forward of the TA-1832 stirrup assembly.

Pull TC-290 diaphragm—TB-438 diaphragm plate—return spring TA-1821 can then be removed. Reassemble in reverse of above.

REPLACING TA-4147 VALVE DISC

If pump has a heavy continuous leaking of gas into the lubricating oil—TA-4147 valve disc probably needs replacing. Disconnect power supply into TA-906 disc retainer. Remove TA-906 disc retainer from TB-441 body—caution: care should be taken not to lose TA-77 valve spring and TA-579 washer directly under TA-906 disc retainer.

Before removing, note the position of the TA-4147 valve disc, so that the disc is replaced to the same position as it was removed (see page 8). Lap the TA-4147 disc with a good valve grinding compound before replacing.

When replacing TA-4147 valve disc be sure to also replace the drive pin that is supplied when you order the disc.

REMOVING TB-446 VALVE ASSEMBLY FROM PUMP HOUSING

Should it be necessary to remove TB-440 flipper arm assembly from the pump housing, disconnect TB-1193 SS tubing, the power inlet line from TA-906 disc retainer and the gas exhaust line. Remove the four TA-141 machine screws and four TA-425 lock washers. The TB-446 valve assembly can then be withdrawn from pump body.

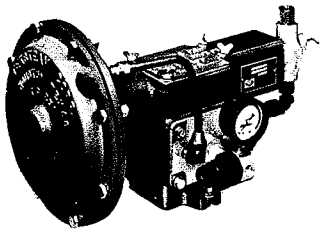
The flipper arm bearing is an integral part of the TB-440 flipper arm and is press fitted into the TB-441 body. A punch must be used to remove the flipper arm from the valve body. To do this the procedure under the heading, "Replacing TA-4147 Valve Disc," must be performed. When these parts are removed the TB-440 flipper arm assembly may be punched from the body.

Upon reassembling the lower shaft of the TB-440 flipper arm must fit into the TA-1838 flipper spring adapter.

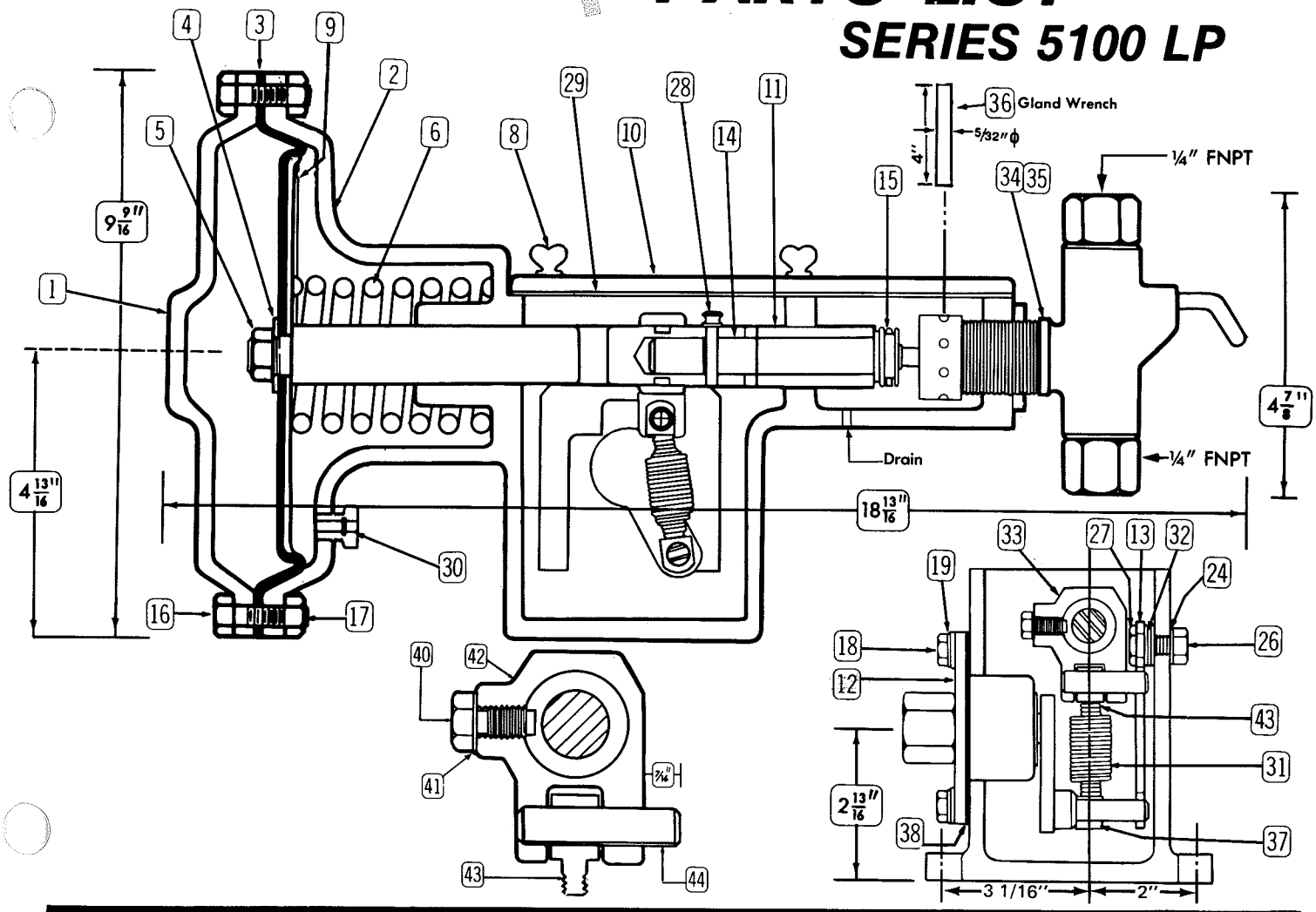
TO REPLACE THE FLIPPER SPRING

Follow the procedure as outlined under "Removing TB-446 Valve Assembly from Pump Housing."

After removing the valve assembly, remove TB-548 cover. At this point TA-1832 stirrup assembly may be turned upside down on the thrust rod—unscrew TA-1820 flipper spring. To reassemble follow the above procedure in reverse.



PARTS LIST
SERIES 5100 LP



ITEM	PART NO.	NO. REQD.	NAME	MATERIAL
1	TC-252	1	Diaphragm Cover	Cast Iron
2	TD-251	1	Housing	Cast Iron
† 3 *	TC-290	1	Molded Diaphragm	Buna-N, Nylon
4	TA-3321	1	Washer	Heavy Stl. Cadmium Pl.
5	TA-3320	1	Locknut	Stl. Cadmium Pl.
6 *	TA-1821	1	Return Spring	C.S. Cadmium Pl.
7	TA-1855	1	Warning Tag (not shown)	Tape
8	TA-136	4	Wing Screws	Stl. Cadmium Pl.
9	TB-438	1	Diaphragm Plate	Steel
10	TB-548	1	Cover	Cast Iron
11	TB-444	1	Thrust Rod	Steel
12	TB-446	1	Pilot Valve	See Page 7
13	TA-1823	1	Bumper Plate	Steel
14	TB-447	1	Rod Adapter	Steel
15	TA-290	1	Pin	Steel
16	TA-139	8	Hex Hd. Cap Screw	Steel
17	TA-2207	8	Hex Nut	Steel
18	TA-141	4	Hex Hd. Mach. Screw	C.S. Cad. Pl.
19	TA-425	4	Lockwasher	Cadmium Plated
20	TA-1854	1	Pressure Gauge Range 0-35 psig (Furnished on H & HP models only)	Brass Element
21	TA-1718	1	Regulator (Furnished on H & HP models only)	Aluminum/Brass
22	TA-3324	1	Nipple (Furnished on H & HP models only)	Stl. Cad. Pl.
24	TA-459	1	Light Lockwasher	Cadmium Plated
25	TA-1293	1	Inlet Tag	Paper

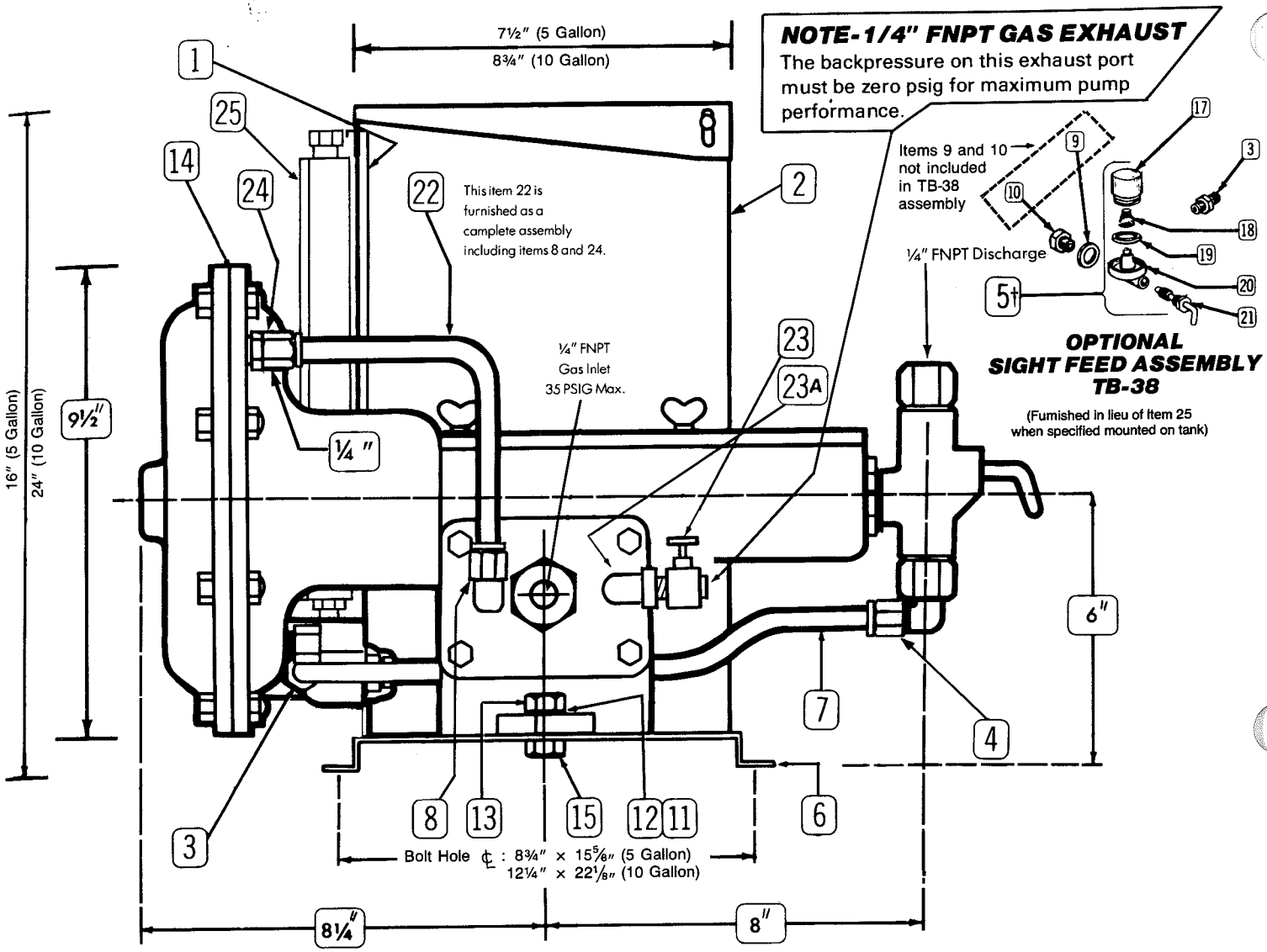
ITEM	PART NO.	NO. REQD.	NAME	MATERIAL
26	TA-3323	1	Hex. Nut	Semifinish Stl. Cad. Pl.
27	TA-1827	1	Bumper Plate Screw	Steel
28 *	TA-1828	1	Adjusting Pin	Steel
29 *	TA-1546	1	Gasket	Buna-N
30	TA-1835	1	Air Vent	Brass
31 *	TA-1820	1	Flipper Spring	Steel
32 *	TA-746	3	Washer	Steel
33	TA-1832	1	Stirrup Assembly	Cast Iron & Steel
34		1	1/4" Injector Head	Standard Head Assemblies (See page 8 for parts list)
		1	3/8" Injector Head	
		1	1/2" Injector Head	
35		1	1/4" Injector Head	High Pressure Head Assemblies (See page 8 for parts list)
		1	3/8" Injector Head	
		1	1/2" Injector Head	
36**	TA-315	1	Gland Wrench	Steel
37 *	TA-1838	1	Spring Adapter (Bottom)	Steel
38 *	TA-58	1	Gasket—Pilot Valve	Fiber
39	TA-1298	1	Outlet Tag	Paper
40	TA-1829	1	Hex. Hd. Screw	Steel
41	TA-3406	1	Internal Tooth Lockwasher	Carbon Stl. Cad. Pl.
42	TB-471	1	Trip Stirrup	Cast Iron
43 *	TA-1838	1	Spring Adapter (Top)	Steel
44 *	TA-2355	1	Rollpin	Steel

† TC-290 Diaphragm standard for cold weather service

*Recommended Spare Parts

**Parts Not Mounted—Packaged With Unit

PARTS LIST: SERIES 5100 H



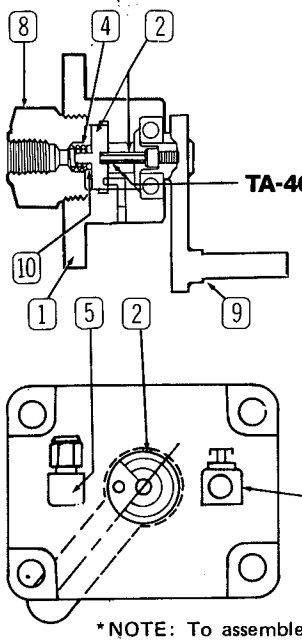
ITEM	PART NO.	NO. REQD.	NAME	MATERIAL
1	TA-529 TA-1742	1	Gauge Stick 5 Gallon Gauge Stick 10 Gallon	Stainless Steel
2	TA-664 TA-1539	1	5 Gallon Tank 10 Gallon Tank	430 Stainless Steel 304 Stainless Steel
3	TA-3118	1	Connector	Polypropylene
4	TA-3116	1	Elbow Connector & Compression Nut Assy.	Polypropylene
† 5	TB-38	1	Sight Feed Assembly	Optional and in lieu of Item 25
6	TA-950	1	Base	Steel
7	TA-3123	1	Suction Line	5/16" x 22" Polypropylene
8	TA-4016	1	Elbow Connector & Compression Nut Assy.	C.S. Cad. plated
9 *	TA-306	1	Gasket	Hard Fiber
10	TA-302	1	Bushing	Brass
11	TA-300	4	Cut Washer	Steel
12	TA-425	2	Lockwasher	Steel
13	TA-144	2	Hex Nut	Steel

ITEM	PART NO.	NO. REQD.	NAME	MATERIAL
14		1	Power Unit	Assembly, less head
15	TA-142	2	Hex Hd. Cap Screw	Steel Cad. Pl.
16 * *	TA-3306	1	Pan Hd. Slotted Machine Screw	Steel Cad. Pl.
17 *	TA-98	1	Bowl	Glass
18	TA-206	1	Strainer	Monel
19 *	TA-104	1	Bowl Gasket	Fiber
20	TB-39	1	Sight Feed Body	Aluminum
21	TA-101	1	Shut off Assembly	Brass
22	TB-1193	1	Pilot Valve Line Assy.	303 S.S. Tubing/with Cad. Plated Fittings
23 23A	TA-2489 TA-0075	1 1	Gas Exhaust Valve Street Ell	Ni Plated Brass C.S. Cad. Plated
24	TA-4015	1	Male Connector & Compression Nut Assy.	C.S. Cad. Plated
25	TB-871 TB-1285	1	Tank Gauge, 5 Gal. Tank Gauge, 10 Gal.	Assembly

*Recommended Spare Parts
†Optional. Will be supplied in lieu of Item 25, Tank Gauge

* *Between pump and reservoir (same relative position as Item 13)

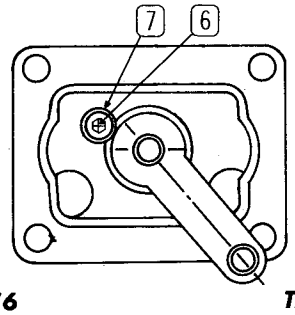
PARTS LIST



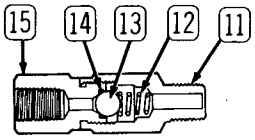
TB-446 PILOT VALVE ASSEMBLY

TA-4062 (PIN ONLY)

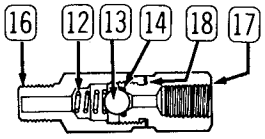
*NOTE: To assemble, move lever arm to left as shown and align hole in pilot valve disc with hole in pilot valve body.



TA-676 BRASS LINE CHECK



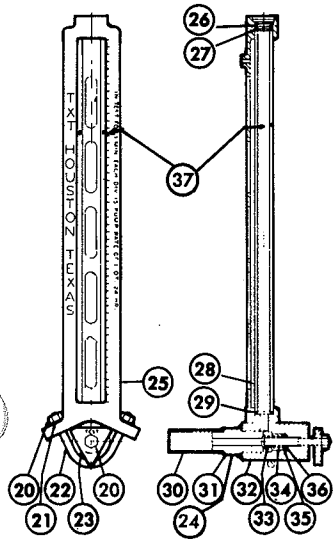
TA-675 303 SS LINE CHECK



ITEM	PART NO.	NO. REQD.	NAME	MATERIAL
1	TB-441	1	Body	Cast Iron
2	TA-4147 TA-4062	1	Valve Disc and Drive-Pin Assy. Pin Only	17.4 Ph SS Steel-Hardened
4 *	TA-77	1	Valve Spring	Stainless Steel
5	TA-4016	1	Elbow Connector & Compression Nut Assy.	C.S. Cad. Plated
6	TA-3387	1	¼-20 x ⅜ Stl. Hex Socket Head Cap Screw	Steel
7	TA-167	1	Washer	Steel
8	TA-906	1	Disc Retainer	C.S. Cad. Plated
9	TB-440	1	Flipper Arm & Bearing Assy.	17.4 SS Flipper Arm with C.S. Bearing
10 *	TA-579	1	Washer	Stainless Steel
11	TA-677	1	Outlet Body	Brass
12 *	TA-391	1	Spring	Stainless Steel
13 *	TA-54	1	Ball	Stainless Steel
14 *	TA-2093 TA-479	1	O-Ring	Viton Buna-N
15	TA-678	1	Inlet Body	Brass
16	TA-1296	1	Outlet Body	Stainless Steel
17	TA-1297	1	Inlet Body	Stainless Steel
18 *	TA-1574	1	Washer	Stainless Steel
19	TA-2489	1	Valve	Brass, Ni Plated

*Recommended Spare Parts

TB-871 TANK GAUGE FOR 5 GAL. TANK



ITEM	PART NO.	NAME
20	TA-164	Nut
21	TA-577	Washer
22	TA-3106	U-Bolt
23	TA-3112	Handle Valve
*24	TA-3199	O-Ring, Viton
25	TC-393	Frame, Alum.
*26	TA-3100	Spring, 303 SS
*27	TA-3101	Flat Washer
*28	TA-3102	Gauge Glass
*29	TA-2184	O-Ring, Viton
30	TA-3103	Strainer, 303 SS
31	TA-3104	Retainer Nut, 303 SS
32	TA-3115	Valve Body, 303 SS
33	TA-3114	Stem Valve, 303 SS
34	TA-3113	Spring, 316 SS
35	TA-3328	Washer, 303 SS
36	TA-3107	O-Ring, Viton
37	TA-2163	O-Ring, Buna-N

* TB-874 Repair Kit parts

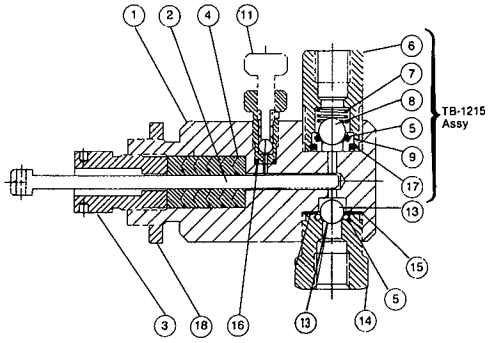
PARTS REQUIRED FOR SOUR GAS APPLICATIONS FURNISHED ONLY WHEN ORDERING PUMP MODELS H AND HP FOR SOUR GAS APPLICATIONS

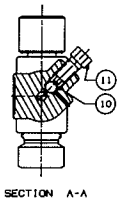
PAGE NO.	ITEM	PART NO.	NO. REQD.	NAME	MATERIAL
5	20	TA-2847	1	Pressure Gauge 0-60 psig	S.S. Element
5	21	TA-2845	1	Regulator 300 # max. inlet	Aluminum

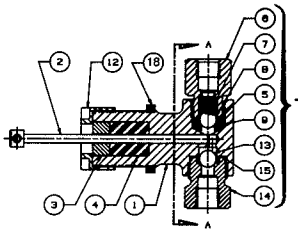
PARTS LIST: Series 5100

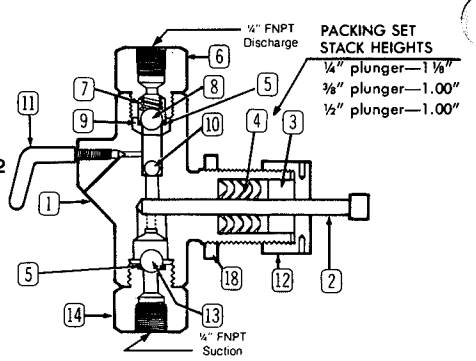
INJECTOR HEADS

PVC Plastic Heads are available.
See page 7 of Series 4300 Pump Bulletin for details.









3/16" HEAD ◄ BEFORE 4-1-90

3/16" HEAD ◄ AFTER 4-1-90

◄ ¼"-⅜"-½" HEADS

PARTS LIST											
Plunger Sizes ►			3/16"	3/16"	¼"		⅜"		½"	
Pump Model Numbers ►			5104 Soft Pkg. 5114 Hard Pkg. Before 4-1-90	5104 Soft Pkg. 5114 Hard Pkg. After 4-1-90	5101 Soft Packing 5111 Hard Packing		5103 Soft Packing 5113 Hard Packing		5105 Soft Packing 5115 Hard Packing	
Item No.		Material Construction	All Stainless Steel (Ductile Not Avail.)	All Stainless Steel (Ductile Not Avail.)	Ductile w/S.S. Trim	All Stainless Steel	Ductile w/S.S. Trim	All Stainless Steel	Ductile w/S.S. Trim	All Stainless Steel
	Head Assembly Nos. ►		TB-1299	TB-1472	TB-166	TB-755	TB-203	TB-756	TB-496	TB-732
1	Body		TC-1588	TC-2040	TC-275	TC-291	TC-276	TC-425	TC-272	TB-349
* 2	Plunger	17-4PH	TA-4747	TA-5643	TA-1312	TA-1312	TA-1745	TA-1745	TA-1876	TA-1876
3	Plunger Packing Gland	303-SST	TA-4332	TA-5642	TA-1463	TA-1463	TA-957	TA-957	TA-1219	TA-1219
* 4	Plunger Packing (see table below for maximum discharge pressures)	Buna-N	TA-3969	TA-3969	TA-1461	TA-1461	TA-1456	TA-1456	TA-0959	TA-0959
		Hard	TA-3948	TA-3948	TA-2295	TA-2295	TA-1875	TA-1875	TA-1874	TA-1874
		Viton	TA-3967	TA-3967	TA-4102	TA-4102	TA-4101	TA-4101	TA-4103	TA-4103
		Teflon	TA-3966	TA-3966	TA-1642	TA-1642	TA-1234	TA-1234	TA-1012	TA-1012
* 5	O-Ring, Suction & Discharge (included in items 9 & 14)	Buna-N	TA-0479	TA-0479	TA-0479	TA-0479	TA-0479	TA-0479	TA-0479	TA-0479
		Viton	TA-2093	TA-2093	TA-2580	TA-2580	TA-2580	TA-2580	TA-2580	TA-2580
6	Top Bushing	302-SST	TA-4321	TA-1496	TA-1496	TA-1496	TA-1496	TA-1496	TA-1496	TA-1496
* 7	Ball Check Spring	316-SST	TA-3427	TA-0077	TA-0077	TA-0077	TA-0077	TA-0077	TA-0077	TA-0077
* 8	Large Top Ball 3/8"	316-SST	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054
		Hastelloy	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064
* 9	Top Seat-Assembly Buna-N "O" Ring	303-SST	TA-4322	TB-0737	TB-0737	TB-0737	TB-0737	TB-0737	TB-0737	TB-0737
	Top Seat-Assembly (Metal-to-Metal)	303-SST	NA	NA	TA-0806	TA-0806	TA-0806	TA-0806	TA-0806	TA-0806
* 10	Small Top Ball 1/4"	316-SST	NA	NA	TA-0126	TA-0126	TA-0126	TA-0126	TA-0126	TA-0126
11	Priming Valve	303-SST	TA-4027	TA-5462	TA-1497	TA-1497	TA-1497	TA-1497	TA-1497	TA-1497
12	Nut, Plunger Packing Gland	303-SST	NA	TA-4104	TA-4104	TA-4104	TA-4104	TA-4104	TA-4104	TA-4104
* 13	Suction Ball 3/8"	316-SST	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054	TA-0054
		Hastelloy	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064	TA-0064
	Suction Ball 1/2" (Use with TA-0771 Metal-to-Metal Bottom Seat only	316-SST	NA	NA	TA-0053	TA-0053	TA-0053	TA-0053	TA-0053	TA-0053
* 14	Bottom Seat (w/Buna-N "O" Ring)	303-SST	TB-1216	TB-1216	TB-0736	TB-0736	TB-0736	TB-0736	TB-0736	TB-0736
	Bottom Seat Bushing Metal-to-Metal (Use w/TA-0053 1/2" ball only)	303-SST	NA	NA	TA-0771	TA-0771	TA-0771	TA-0771	TA-0771	TA-0771
15	Gasket	304-SST	TA-4394	TA-4394	NA	NA	NA	NA	NA	NA
* 16	O-Ring	Buna-N	TA-0759	NA	NA	NA	NA	NA	NA	NA
* 17	O-Ring	Buna-N	TA-2116	NA	NA	NA	NA	NA	NA	NA
18	Locknut	Brass	TA-0225	TA-0225	TA-0225	TA-0225	TA-0225	TA-0225	TA-0225	TA-0225

* Recommended Spare Parts

PLUNGER PACKING-MAX DISCHARGE PRESSURES				
Material	Pressure, PSIG			
	3/16"	1/4"	3/8"	1/2"
Buna-N	5000	3000	3000	3000
Hard	6000	6000	6000	3500
Viton	5000	3500	3500	3500
Teflon	3000	1500	1500	1500

1020 Rankin Rd., Houston, TX 77073
P.O. Box 60706, Houston, TX 77205
TEL: (713) 443-7000
FAX: (713) 443-6308
FAX: (713) 443-4802
TLX: 166119 TXT UT

TXT™
TEXSTEAM INC.